

ABSTRACT OF THE DISCLOSURE

There is provided a magnetoresistance effect element capable of precisely defining the active region in a CPP type MR element and of effectively suppressing and eliminating the influence of a magnetic field due to current from an electrode, and a magnetic head and magnetic reproducing system using the same. The active region of the MR element is defined by the area of a portion through which a sense current flows. Moreover, the shape of the cross section of a pillar electrode or pillar non-magnetic material for defining the active region of the element is designed to extend along the flow of a magnetic flux so as to efficiently read only a signal from a track directly below the active region. When the magnetic field due to current from the pillar electrode can not be ignored, the magnetic flux from a recording medium asymmetrically enters yokes and the magnetization free layer of the MR element to some extent. In expectation of this, if the cross section of the pillar electrode is designed to be asymmetric so as to extend along the flow of the magnetic flux, the regenerative efficiency is improved.

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